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CONNECTING ADJUSTMENT ASSEMBLY**CROSS-REFERENCE TO RELATED APPLICATIONS**

This Application claims priority to U.S. Provisional Application Ser. No. 61/561,432, same title herewith, filed on Nov. 18, 2011, which is incorporated in its entirety herein by reference.

BACKGROUND

Fall protection assemblies that include climbing straps are often used by utility workers when climbing up utility poles. The climbing straps can include a first strap that is placed around an outer portion of the pole to be climbed and an inner strap that is positioned around an inner portion of the pole to be climbed. If a fall event occurs, the straps cinch up on the pole to limit the distance of the fall. The straps are connected together via connecting members. The ability to loosen and tighten the straps around the pole to position the straps as the worker climbs or descends the pole is an important function for a fall protection assembly. The connectors should aid in the loosening and tightening functions of the straps.

For the reasons stated above and for other reasons stated below which will become apparent to those skilled in the art upon reading and understanding the present specification, there is a need in the art for connecting members that provide effective and efficient means for connecting straps and loosening and tightening straps.

SUMMARY OF INVENTION

The above-mentioned problems of current systems are addressed by embodiments of the present invention and will be understood by reading and studying the following specification. The following summary is made by way of example and not by way of limitation. It is merely provided to aid the reader in understanding some of the aspects of the invention.

In one embodiment, a back plate assembly is provided that includes a body and a roller. The body has a first side and an opposed second side. The body further has a first edge and an opposed second edge that defines the length of the body. The body also has a third edge and an opposed fourth edge that define a width of the body. The body, still further, has a groove in the second side that passes along the width of the body. The roller is rotationally coupled proximate the second edge of the body.

In another embodiment, a connecting adjustment assembly is provided. The connecting assembly includes a back plate assembly and a sliding engagement member. The back plate assembly includes a body and a roller. The body has a first side and an opposed second side. The body further has a first edge and an opposed second edge that defines the length of the body. The body also has a third edge and an opposed fourth edge that defines a width of the body. The body still further has a groove in the second side that passes along the width of the body. The roller is rotationally coupled proximate the second edge of the body. The sliding engagement member includes a first post, a second post, a first side plate, a second side plate and a connection head. The first post is configured and arranged to be at least partially received within the groove of the body. The first post and the second post extend between the first plate and the second plate in a spaced fashion such that the passage is formed by the first post, the second post, the first side plate and the second side plate. The connecting head extends from the second post.

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In still another embodiment, a fall protection assembly is provided, the fall protection assembly includes an outer strap, an inner strap of at least one connector adjustment assembly, a sliding engagement member, a connector and first, second and third carabiners. The at least one connector adjustment assembly includes a back plate assembly and a roller. The back plate assembly has a body. The body has a first side and an opposed second side. The body further has a first edge and an opposed second edge that defines the length of the body. The body also has a third edge and an opposed fourth edge that defines a width of the body. The body still further has a groove in the second side that passes along the width of the body. The roller is rotationally coupled proximate the second edge of the body. The sliding engagement member includes a first post and a connecting head. The first post that is configured and arranged to be at least partially received within the groove of the body such that the first post positions the first side of the back plate to engage the outer belt. The connecting head is coupled to the first post. The first carabiner engages the connecting head. The inner strap is selectively received within the first carabiner. The connector has a first portion that is statically coupled to the outer belt and a second side that is slidably coupled to the inner belt. The second carabiner is slidably coupled to the inner strap. Finally, the third carabiner is statically coupled to an end of the inner strap. The second and third carabiners are configured and arranged to couple the fall protection assembly to a safety harness of a user.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention can be more easily understood and further advantages and uses thereof will be more readily apparent, when considered in view of the detailed description and the following figures in which:

FIG. 1A is a top view of a fall protection assembly of one embodiment of the present invention;

FIG. 1B is a side perspective view of the fall protection assembly of FIG. 1A;

FIG. 1C is another side perspective view of the fall protection assembly of FIG. 1A;

FIG. 1D is a close up view of a carabiner of an embodiment of the fall protection assembly of FIG. 1B;

FIG. 2 is a side perspective view of a connecting adjustment assembly of one embodiment of the present invention;

FIG. 3A is a side perspective view of the connecting adjustment assembly of FIG. 2 engaging a belt;

FIG. 3B is a side view of the connecting assembly of FIG. 2 engaging the belt;

FIG. 4 is an unassembled side perspective view of the connecting adjustment assembly of FIG. 2;

FIG. 5A is a front view of a back plate assembly of one embodiment of the present invention;

FIG. 5B is a top view of the back plate assembly of FIG. 5A;

FIG. 5C is a rear view of the back plate assembly of FIG. 5A;

FIG. 5D is a front perspective view of the back plate assembly of FIG. 5A;

FIG. 5E is a rear perspective view of the back plate assembly of FIG. 5A;

FIG. 5F is an another rear perspective view of the back plate assembly of FIG. 5A;

FIG. 6A is a front view of a sliding engagement member of one embodiment of the present invention;

FIG. 6B is a top view of the sliding engagement member of FIG. 6A;